



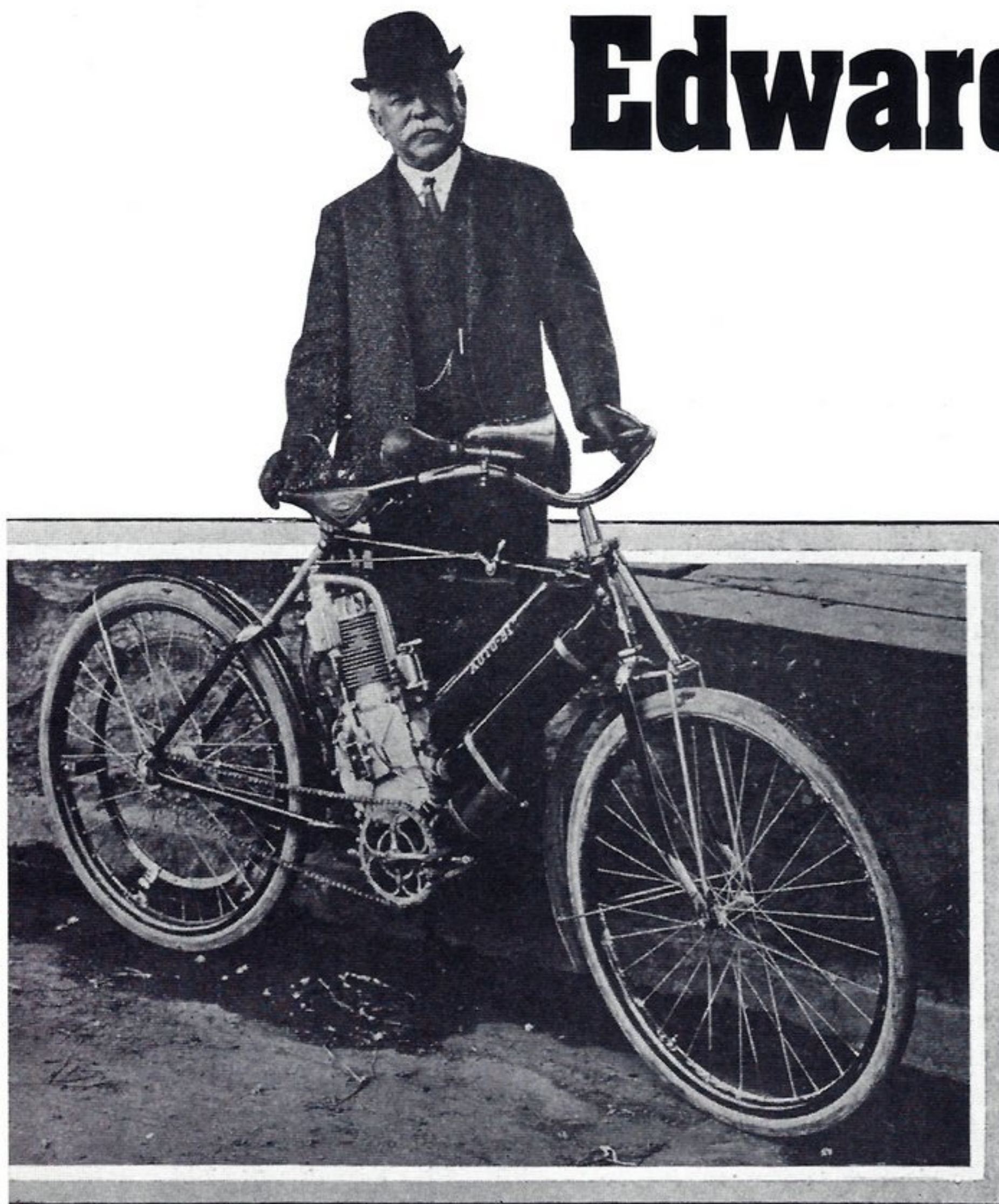
# THE ANTIQUE MOTORCYCLE

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# Edward R. Thomas

## The Pioneer Who Blazed The Way

By AMCA Staff

**"Edward R. Thomas was the father of the American-built motor bicycle."**

This is a bold statement and one that will surely draw some flack. But if we define "father" as the first manufacturer of an American-built motor bicycle, then there is no doubt Mr. Thomas fits the bill. Turning the pages back almost 100 years, and with the help of the publications of the era, we can trace the road Mr. Thomas traveled to obtain the title "father of the American-built motor bicycle."

Before we begin this journey, some ground work must be laid. By the late 1890s the gasoline engine had been in limited commercial use for years, but what was lacking for this invention was a "killer application," as computer developers of today would say. The general public had a hard time visualizing a practical use for these massive engines other than as stationary machines whose application

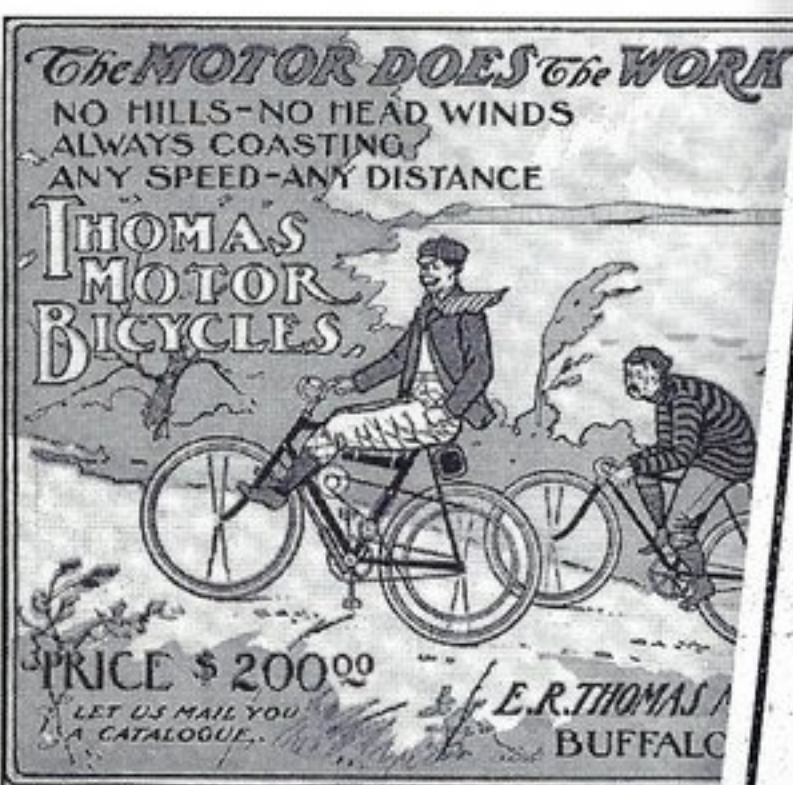
among others, was pumping water and supplying power to drive other massive machines of the era.

In the inventor's mind it was easy to visualize a gasoline powered vehicle, replacing the horse and wagon, but many roadblocks stood in the way of the general public's acceptance of this form of transportation. Three main hurdles to overcome were weight, complexity and power transmission. History credits Gottlieb Daimler with producing the first working four-stroke engine in the second half of the 1800s and by 1885 he had a crude application for his invention. Daimler installed his coal gas fired engine in a two-wheeled vehicle and in short order proved the soundness of his engine design. Practical it was not, but a visionary like Edward R. Thomas and many of his contemporaries were hard at work

trying to perfect a killer application for the four-stroke engine.

Motor vehicle terminology in the late half of the 1800s was far from locked down. Even into the first few years of this century, the term "motor cycle" was loosely thrown around and could apply to any gasoline powered motor vehicle having two, three or four wheels. Although generally, "motor cycle" was applied to multi-wheeled vehicles of light construction, i.e., using light or heavy duty bicycle wheels. If you read turn-of-the-century publications like *The Cycling Gazette*, your head will be spinning with the way words like "motor cycle," "automobile" and "motor tricycle" are used interchangeably to describe motor vehicles of that era. One only has to refer to George Wyman's "Across America" article (part three appears in





A 1901 Thomas sales piece. Note the line *bicycle automobile*. Vehicle terminology was still being developed. Bruce Lindsay collection.

**THE AUTO-BI** is a *bicycle automobile* in a class by itself. It always coasts with speed—at will of rider—from three to thirty miles per hour. It is started with a turn of the pedals. It is stopped with a twist of the grip. The coaster brake gives perfect control. It costs 1-5-of-a-cent per mile. You can ascend 25 per cent. grades, and where you go you enjoy the pleasing sensation of flying.

**The AUTO-TRI** (motor tricycle) can be run at varying speeds from three to twenty-five miles per hour. It is controlled in the same manner as the Auto-Bi and is particularly desirable for those who want a machine that can be stopped without dismounting.

**The AUTO-QUAD** is a convertible tricycle with a seat mounted on springs, at the front, giving accommodations for two. The seat can be replaced by a box for the delivery of goods.

70 per cent. of the automobiles sold in Europe are of the last two types.

**THOMAS AIR COOLED MOTORS.** 1½-I. H. P., weight 22-lbs.; 3-I. H. P., weight 55-lbs. Suitable for Bicycles, Tandems, Tricycles, Launches, Light Vehicles, Etc., Etc. Send for catalogue.

**AGENTS WANTED EVERYWHERE.**

**E. R. Thomas Motor Company, (Inc.)**  
BUFFALO, N. Y.

Perhaps like so many others in the bicycle industry, Thomas could see the hand writing on the wall as sales began to drop off. Many people connected to the industry in the late 1890s saw the motor bicycle as their salvation.

Apparently Mr. Thomas's illness was short lived for by October of 1900 he had settled in Buffalo, New York and established the E.R. Thomas Motor Company. Did Mr. Thomas have financial help from his Canadian employer or was he capable of supplying the necessary capital to launch such an undertaking? We may never know, but the press reported that by October 4, 1900, the E.R. Thomas Motor Company was up and running.

**MODEL 35**  
**THOMAS AUTO-BI**

THE MOTOR BICYCLE FOR BUSINESS AND PLEASURE.

LIGHT, STRONG, SIMPLE, SPEEDY, SAFE.

COMPACT, SYMMETRICAL, ECONOMICAL.

**SPECIAL FEATURES:**  
Truss Spring Fork.  
Hygienic Cushion Frame.  
Combined Steel and Leather Belt.

All Vibration, and Belt Troubles Solved

ADDING  
300 Per Cent. to Safety and Comfort.  
100 Per cent. to Durability and Efficiency.

We have just printed an interesting and instructive little booklet about the Motor Bicycle. Send for a copy, it's free on request.

E. R. THOMAS MOTOR CO., 1255 Niagara St. Buffalo, N. Y.

Thomas ad from *The Motorcycle Magazine*, June 1903.

know today as a motorcycle.

Any student of history knows, that one man or woman working alone in a vacuum is hard pressed to invent anything. Inventions flourish when ideas are shared. When people can pick up an existing idea and improve on it, they create new applications for new technology. In this case, Thomas was more of an applications engineer than an inventor.

New technology was definitely flourishing in the late 1800s. By 1892 the Safety Bicycle was all the rage. The Dunlop Rubber Company had launched its pneumatic tire in 1889 and this helped to bring bicycles within reach of the common working man or woman.

But seeming as quickly as it had begun, the bicycle craze reached its peak and was beginning to decline by the late 1890s. Edward R. Thomas played an active role throughout that

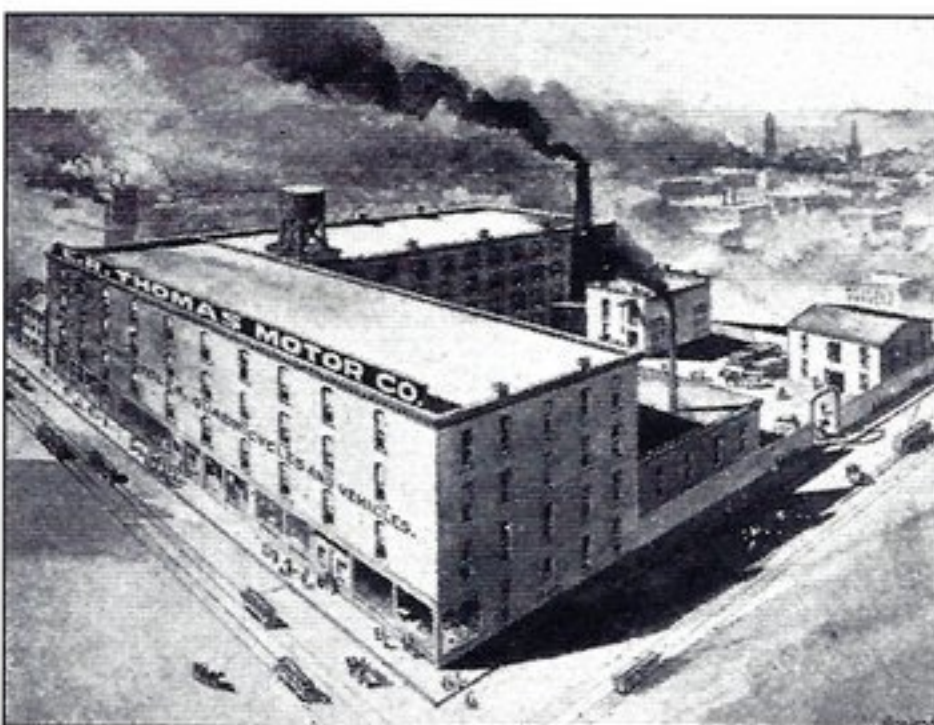
this issue) to see that he refers to his motor vehicle at times as a motorcycle and then again as a motor bicycle, and this was 1903. Today it all seems so logical but at the turn of the century *motor bicycle* was what we

period in the bicycle's popularity of the 1890s. Thomas was a managing partner with the Canadian firm, Canada Cycle & Automobile Company Ltd. Here is a note from a trade publication, *The Cycling Gazette* from May 3, 1900.

### Thomas Resigns Gives up Vice-Presidency of the Canadian Combination

Montreal, Que., April 29—Special Correspondence—E.R. Thomas has been obliged to resign the first Vice-Presidency of the Canada Cycle & Automobile Company Ltd. on account of continued ill health and has left for the south for a complete rest.

Though obliged to relinquish active duties in connection with the company, Mr. Thomas will still retain his seat on the Board of Directors, where the counsel and advice his experience gives will be available in the interest of the company.



Main office and factory, Broadway and Elm Street, Buffalo, New York.

*The Cycling Gazette* October 4, 1900

### Latest Offerings

#### Motor Bicycles and Motor Tricycles Are Certainly Here

Waltham Mfg. Co., American Bicycle Co., the DeDion-Bouton Motorette Co., and the E.R. Thomas Motor Company Are Some of the Producers.

Notwithstanding, that motor cycles are a distinct novelty, requiring in their production a great expenditure of money for new machinery, the employment of men skilled in gas engines and other departures from bicycle manufacture to numerous to mention, there is not the slightest doubt that the wheelmen will next season be able to choose from a variety of makes of motor cycles, for even this early there are no less than four manufacturers in the field, two making motor bicycles and all making motor tricycles.

The Waltham Manufacturing Company, Waltham, Mass., makes both types, as does also the E.R. Thomas Motor Company, of Buffalo. The DeDion-Bouton Motorette Company of New York and Brooklyn, makes motor tricycles and motor vehicles, and the American Bicycle Company, at several factories is making, in addition to motor tricycles, among them the Trimoto and the Cleveland tricycle.



## THE PIONEER WHO BLAZED THE WAY CONTINUED

What separated Mr. Thomas from his competitors was that he produced his own engine. The Waltham Mfg. Co. produced their machines, sold as Orient, with French-built Astor engines. American Bicycle Co., sold motor tricycles under the Pope label employing the French DeDion-Bouton powerplant in its product. The DeDion-Bouton Motorette Company was the U.S. import arm of the parent French company.

Thomas was indeed a pioneer when it came to a domestic made product, but he gave credit where credit was due. Quoting from a 1901 Thomas Company brochure:

**The problem was to reduce the weight, power, vibration and complications of the motors in use, and still secure the highest strength, durability and efficiency, so as to adapt bicycles for its use. There being at that time no successful motors made in this country, the most practical and popular motors made in France, and in other European countries were studied their best points selected, improved upon and Americanized. To these points were added new ideas, so that the result really embodies the combined genius and skill of two hemispheres...**

**A member of the Company has been engaged in the gas engine business in Europe and America since 1876, the year that the first moderately successful gas engine was invented, and is thoroughly posted on all gas engines.**

By late 1900 the E.R. Thomas Motor Company had three gas engines in production and were manufacturing their version of a tricycle which they called the Auto-Tri. Specifications of these early Thomas single cylinder engines were as follows, again from the Thomas brochure:

"One and a half indicated horse power, for bicycles. Height, 12 inches; width of crank case 2 7/8 inches; Weight, 20 pounds.

Two and one quarter indicated horse power. Height 18 inches; width of crank case 3 1/4 inches; weight 50 pounds.

Three indicated horse power. Height 18 1/2 inches; width of crank case 3 3/4 inches; weight 56 pounds."

All three were air-cooled, four-strokes and featured Thomas's own carburetor and patented electric ignition system. This ignition system consisted of a dry cell battery, an induction coil and a spark plug of their own design: "The spark controller (patents pending) is a new construction consisting of a greatly strengthened vibrator controlled by a spring that is backed up for a portion of its length with solid metal, relieving the flexible portion of all strain." Sounds pretty impressive for 1900.

All moving parts were made of tool steel, the crank pins were hardened and the bearings were of phosphor bronze. Crank cases were vertically split and employed "large binding surfaces permitting more bolts and securing an adjustment so exact that the case is practically one-piece, absolutely oil and dust-proof, and air tight."

A high level of quality was involved in the engines manufacture as they mentioned all parts were interchangeable and could be duplicated in any quantity.

In mid-October *The Cycling Gazette*, which was a weekly publication, ran another article on Thomas progress.

*The Cycling Gazette*      October 11, 1900

### Thomas' Designs

#### Motor Bicycles in Two Types Offered to the 1901 Trade

After a lengthened period of experiment with many different designs the E.R. Thomas Motor Co., Buffalo has brought out two designs of motor bicycles that are radical departures from any previous designs, and that the company, we confidently believe, has at last placed the motor bicycle on a commercial and practical basis.

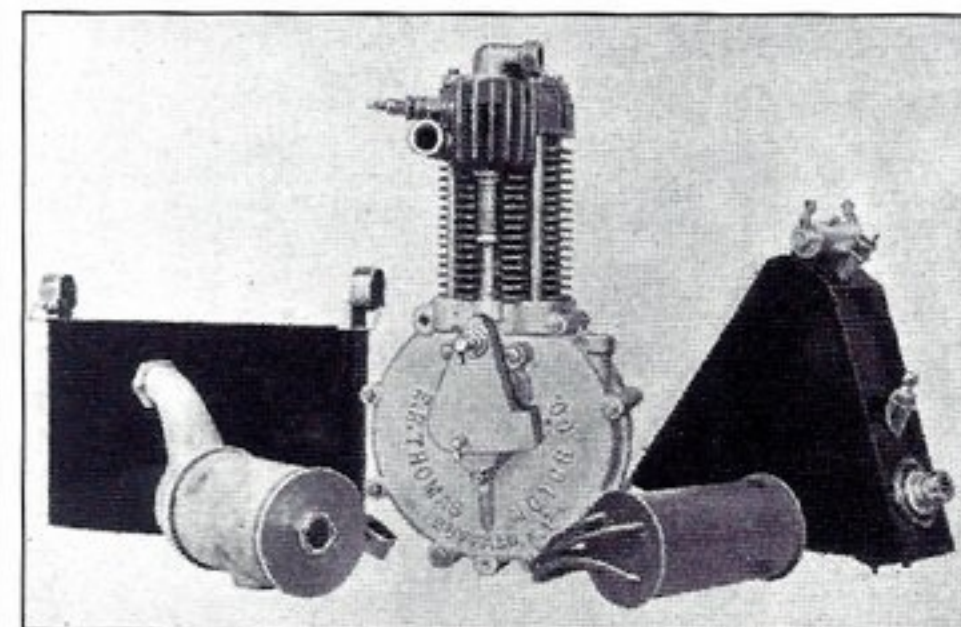
The designs overcame the serious disadvantages of top heaviness, heat, improper distribution of weight, strain and vibrations while in steadiness, efficiency, simplicity and fine running qualities they are particularly noteworthy. All possible details of fine workmanship, grace, finish and strength, have been taken into consideration to make the machines all that can be desired in efficiency and attractiveness.

Nineteen-hundred and one appears to be the year when production of complete motor bicycles began at the Thomas factory. A Thomas 1901 sales brochure lists two motor bicycles which they called Auto-Bi No. 1 and Auto-Bi No. 2. Both machines in this early brochure are presented as illustrations not photographs. This is in contrast to Thomas's motor tricycle, called the Auto-Tri also in the same brochure, which was printed from a photograph. If we assume the 1901 brochure was actually produced in late 1900, it appears the Auto-Tri and the single cylinder motors were off the drawing boards and in production but perhaps the Auto-Bis were still in the development stage or near production.

In the brochure the Auto-Bi No. 1 is listed as a Racer. This appears to be somewhat odd after checking the specifications. This model's specifications mention a 24-inch single tube frame, two and one quarter horsepower engine, total weight of 110 pounds and a maximum speed of 30 miles per hour. The price was \$250.

Auto-Bi No. 2, the Roadster, used a different style frame but still 24-inch, one and a half horsepower engine with a total weight of 75 pounds. and was priced at \$200.

It is hard to say, almost 100 years after the fact, if the Racer was ever produced or if its specifications listed were accurate, but we do know Auto-Bi No. 2, the Roadster model, was produced and perhaps in significant quantities. The pioneering little Thomas Auto-Bi was advertised and produced until 1909 with few modifications. In 1909 the Thomas Auto-Bi became the Greyhound and struggled on for a few more years. Production records have vanished but quantities must have been sizeable to justify the nine years of advertising alone. In early 1901 the outlook was reported to be bright.



Three sizes of Thomas motors were available for motor bicycles.



## THE PIONEER WHO BLAZED THE WAY CONTINUED

The Cycling Gazette January 3, 1901

### Motor Bicycles

**Are Being Made in Quantities by  
E.R. Thomas Motor Co.**

**Factory is Splendidly Equipped -  
Capacity is Twenty Machines a  
Day - This Progressive Company  
is Confident of the Newest  
Vehicles' Success.**

A visit to the factory of the E.R. Thomas Motor Company, Buffalo N.Y. will somewhat astonish those whose faith in the permanency and stability of the motor bicycle industry has been so frequently and rudely shaken... Large additions of the newest and best machinery have been recently made, bringing the present capacity up to six thousand motor bicycles per annum - the largest in America and probably the world... The factory is being visited daily by enterprising bicycle agents and many orders are booked... Shipments are being made daily to many United States and foreign concerns.



This engine owned by AMCA member Bill Eggers bears the number 612A.

Who's to say if the E.R. Thomas Motor Company ever reached six thousand motor bicycles per annum, but here is some food for thought. How many Thiem motorcycles have you seen? One, but more then likely, none. The Thiem motorcycle company was in business from 1903 to 1914; we don't know their total production numbers but we do have a snap shot in time to help us. *The Minneapolis Journal*, of June 22, 1909, published a list of all the automobiles and motorcycles registered in the city. Among 28 different brands listed, including Thor, Indian, Wagner and Harley, were thirty Thiem motorcycles.

And what ultimately became of the E.R. Thomas Motor Company? At the

same time, early motorcyclists were enjoying his Auto-Bi, this captain of industry was also producing some of America's finest automobiles. Perhaps you have heard of the Thomas Flyer. The very machine that won the first around the world race in 1908. Hollywood even made a movie about the event, *The Great Race*.



The Thomas Flyer winner of The Great Race in 1908. New York to Paris, 169 days, 13,341 miles.

*Editor's Note:* We wish to express our appreciation to Herb Glass, Bob Chantland, Bill Eggers and Bruce Lindsay for their help with this article.



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